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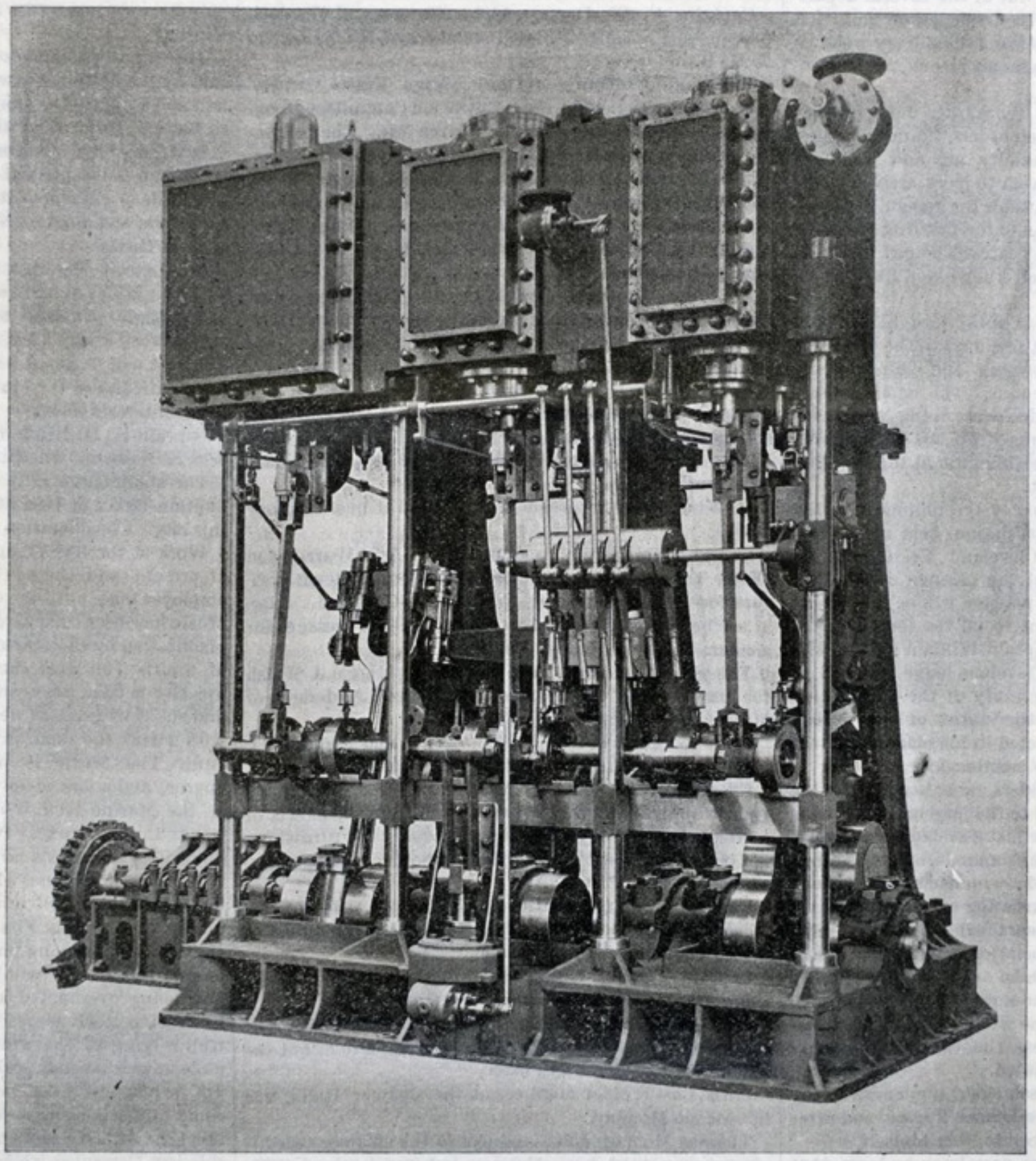
A "GLOBE" TRIPLE EXPANSION.

THE accompanying illustration shows the handsome triple expansion engine built by the Globe Iron Works Co., for the yacht Comanche, now being fitted out at their yards and built for lake and ocean service.

The engine, placed under the immense steel sheer-legs at the shipyard, has just been hoisted aboard in one lift and the yacht with her magnificent appointments will be ready for service early in the summer.

Our technical readers will be interested in the following description of this modern piece of mechanism. The triple expansion is of the inverted vertical overhead cylinder type, with a diameter of 14″ for the high, 23″ intermediate and 36″ for the low pressure cylinder, by 24″ stroke. Piston valves are used on the high and intermediate engines, while that of the low pressure engine is fitted with a double ported side valve; the valve chests are on the working side of the engine and are driven direct from the connecting rod and is what is known as the joy gear. With this gear the lead remains constant at all grades of cut-off. The crank shaft is built up in one piece from the coupling abaft the thrust block to the forward side of the forward journal and the collars for the thrust are formed on the after end. The crank shaft is supported by six journals in the bed plate and one on the thrust block. The thrust block is of the horse shoe type and the shoes are faced with white metal. The main and crank pin brasses are filled with the same metal. There are two feed, one bilge and one cold water pump, attached to the after column of the after engine and are driven by drag links from the cross-head. The air pump is lined with brass and the foot, bucket and discharge valves as well are of brass. The plungers and piston rods of all of the pumps are of the same metal. The condenser is separate from the main engines, circular in form and fitted with 800 tinned brass tubes and the condensing water is on the inside and traverses the length of the condensers twice before it is discharged overboard. The pistons for the main engines are of cast iron, fitted with a single packing ring set out by flat bent springs. Piston rods and valve stems are of steel and the cross-heads, connecting rods and the entire shafting are of the best forged scrap iron; liberal bearing surfaces are provided on all of the journals. The condensing water is driven through the condensers by a 7″ centrifugal pump driven direct by a 5″ by 6″ vertical engine attached to the pump.



TRIPLE EXPANSION ENGINE OF THE YACHT COMANCHE.

The main engines are supplied with steam from a Scotch type boiler 12 feet diameter by 9 feet long, having 3 furnaces 36″ in diameter. The furnaces are plain and stiffened with the Adamson joints. The boiler is of steel 1 1-16″ thick, and is built to stand a working pressure of 160 pounds per square inch. There is a small donkey boiler provided for supplying steam to run the electric light engine, pumps, etc., when steam is not up on the large boiler. A vertical duplex pump is provided to be used as an auxiliary feed and for washing decks, etc. The electric light plant is in duplicate and consists of two small vertical direct acting engines attached to the dynamos, and is fitted complete with switch board and other accessories. The main engine turns a sectional cast iron screw of 9 feet diameter by 10 feet 6 inches pitch.

The general dimensions of the Comanche show a well proportioned hull, and the extreme length which the St. Lawrence system of canals can accommodate, has been given her. She has remarkably fine lines and her shell plates are of mild steel, stern and stern post of wrought iron, and no amount of skill or material has been spared to make her the handsomest, most seaworthy and powerful steam yacht now afloat on the lakes, and a more than usual attention, even in this class of tonnage, has been given to her internal arrangements, which even the most technical critic must admit is as near perfection as it is possible to get at; no flimsy, gimcrack, gingerbread work can be found about her from stem to stern or from keel to truck.

Mr. H. M. Hanna, president of the Globe Iron Works Co., has had built a yacht which is simply a masterpiece in marine architecture, and the plans adopted after mature consideration, have been strictly embodied in the entire construction, even to the minutest detail.

Her general dimensions are 185 feet ever all, 25 feet beam and 14 feet 3 inches molded depth. She has an elegantly curved stem and an elliptic stern—the deck fittings such as skylights, companionways, boat-skids, wheel-house, smoking room, etc., have been given the utmost strength of construction, and with the clew of a try-sail on her she would no doubt make as good weather of it in an Atlantic gale as any of the large liners diving across there as she has been built with a special view to these emergencies and so that in the words of the old mariner, "She may be able to stay out all night," not looking for a tree to tie up to, as the generality of fancy tonnage is in the habit of doing.

The Comanche carries a brigantine rig and accordingly spreads a fore-top gallant sail, which is "far enough away from home" to keep full behind the crest of even a Cape Horn swell. It is estimated that about 7,000 square feet of canvas will be shown over her rail in moderately fine weather so that she will be able to take care of herself if ever her fuel gave out or any accident happened to her machinery.

Her crew will consist of about twenty men, all told, and there is ample and special accommodations for about the same number of passengers, and this too not for a run of say 24 hours but for a period of months as every possible want and convenience is provided for. In this connection the ventilation arrangements deserve especial notice and it may fairly be inferred that no stuffy or bilge water odor will ever be noticeable as proceeding from even in the most intricate portions of the construction, as an Atlantic Liner is not better fitted with a system of ventilation than the Comanche is.

Another feature frequently met with in fancy high classed tonnage is the narrow circuitous passageways sometimes running at right angles and stopping so abruptly as to defy proper ventilation. In the Comanche the hallways or passages run fore and aft, are wide and commodious and leave clear ventilation at the ends, while the entire system of internal fittings and construction show an Atlantic Liner in miniature with every possible contingency provided for in proportion to the dimensions of the hull.

In the Comanche Mr. H. M. Hanna has the very acme of shipbuilding skill and the highest phase of the modern ingenuity of professions and trades entering into the equipment and completion of so handsome and costly a vessel.

Wherever she may be taken and it is likely that the Comanche will compete with yachts of every build and nationality as her owner intends taking a long cruise throughout the eastern hemisphere and Southern ports, in any company and steaming or sailing with the finest yachts afloat the Comanche will assuredly hold her end up and sustain in a marked manner the high reputation gained by her builders and the lake shipbuilding yards in general.

A MEETING of underwriters engaged in the lake business will be held in New York on March 16th and it is clearly the duty of all general agents to attend so that the principals of the home companies may be well advised in any action which may be taken by the assembly at that time. Lake underwriting ought not to be permitted to be absorbed by exclusively foreign companies accepting the "gilt edge" risks.

CHARTER PARTY—AUTHORIZATION TO "REPORT AT CUSTOM HOUSE" DOES NOT INCLUDE THE RIGHT TO DO SHIP'S INWARD BUSINESS.

U. S. District Court, Southern District of New York

A charter party provided the vessel should be reported at the custom house by the charterers or their appointee or pay £20 liquidated damages. The master reported to the charterers on the day of arrival but the latter and their appointee declined to enter the ship until they should be allowed to do the ship's inward business, which the ship refused. On settlement of freight, charterers claimed to deduct the £20, and this libel was filed by the ship owner to recover it. Held that the right to do the inward business of the ship could not be allowed the charterer unless plainly indicated in the charter, and that the phrase "to report at the custom house" did not include the handling of such inward business hence the ship is reporting to the charterers has fulfilled her part of the charter, and the charterers could not be permitted to deduct the twenty pounds freight. February 1, 1892.

(ORGANIZED 1880.)

CLEVELAND VESSEL OWNERS' ASSOCIATION.

(Membership 1892)

One hundred and sixty-three steamers, and One hundred and forty-four sail and barge, } Aggregating 298,127 tons.

Maintains shipping offices at Cleveland, Ashtabula Harbor, Fairport and Toledo. Regulates wages, protects crews and takes cognizance of all matters in the interest of the members and of the lake commerce generally.

OFFICERS:

H. M. HANNA, - - - - - - President.
M. A. BRADLEY, - - - - - - Vice-President.
GEORGE P. MCKAY, - - - - - Secretary and Treasurer.
H. D. GOULDER, - - - - - - Counsel.

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H. M. Hanna, M. A. Bradley, Thomas Wilson, J. W. Moore, Geo. P. McKay, James Corrigan, B. L. Pennington.

THE MARINE RECORD.—Official Paper.

NEWS AROUND THE LAKES.

CLEVELAND, O.

Word has just been received from the yacht Wadena, thatMr. J. H. Wade intends boarding her with his family at Alexandria and continuing his journey through the Suez canal.

Passing by the works of the Cleveland Shipbuilding Co., on Monday last, attention was directed to the steady stream of skilled labor passing out of the several departments with their usual weekly envelopes, on inquiry it was learned that nearly ten thousand dollars per week go to the homes of these bread winners from this one industry alone.

The River Machine & Boiler Works are doing all they possibly can to keep up with their orders, the deck engines of which this firm make a specialty are now and have been in great demand, they seem to have arrived at the construction which is most suitable for general deck use, the success of this engine is due to the untiring efforts of the members of the firmMessrs. Teare & Thomas. Mat is in himself a whole team and is well known and liked by all marine engineers.

Stock in the World's Fair was subscribed to and paid up in Cleveland during the last few days to the extent of nearly $6,000. Shipbuilders, owners and shippers contributed the bulk of this amount, The commissioner stated that W. J. White, besides subscribing very liberally for stock, had offered a bonus of $75,000 for the privilege of making sales of his chewing gum at the fair, presumably for the exclusive right.

At the regular weekly meeting of the Shipmaster's Excelsior Marine Benevolent Association, held on Friday, the petition adopted by the Cleveland Vessel Owners Association protesting against the passage of the Frye bill was adopted. A similar petition will be drafted by the local lodge, and will be sent to all the lodges of the association for signatures. Captain William Collier, who was financial secretary of the Cleveland lodge, resigned, as on account of being grand secretary of the Association he was unable to look after the duties of both offices. Captain C. E. Benham was elected in his place. Captain W. E. Slackford was elected to membership.

J. W. Grover & Son, shipbuilders, are usually to the fore in beneficent acts relating to the lake marine. It is now learned that the firm have just donated a handsome 5 by 4½ feet Union Jack to the Commodore Perry Association of Naval Veterans, an order which has recently been established at this port and consisting of veterans in the naval service included in the years 1861-1865. The Union Jack is the insignia of the association, and the enterpris ing shipchandlery firm made them a gift of first quality bunting, as the association is composed of veterans who are not too well blessed with the world's goods and are at present few in point of numbers, the courtesy of J. W. Grover & Son is highly appreciated.

Capt. Fish having sold his schooner the South West, has now invested in the small schooner Racine, and after a thorough rebuild, will probably sail her himself.

It will be news to some of the vesselmen to learn that the 25-foot channel has no more ardent a supporter than Capt. Bartlett, g. m. a. w.; his veracity an ancient skill has never been questioned, and in view of these facts, we announce his intention of lecturing the Shipmasters' Association on this important subject on Friday afternoon, this is preparatory to steps being taken to send him to Washington in the interests of all concerned, and if his final lecture only equals the initiatory performances. 35 feet of water will probably be found on the lakes.

It is not generally known, nor is it the custom in this city to spread a lunch at a place of business, yet such we find is the case at the well appointed offices of the Globe Iron Works Co. The general manager, and secretary and reasurer take their seats at either end of the well-filled table, and along each side the purchasing agent, master mechanics, chief draughtsman and his assistants, book keepers, and very frequently a fair sprinkling of visitors and friends are found enjoying a tasty mid-day lunch—*en famille*. When the many advantages of this system are taken into consideration, it is almost a wonder that other large offices and business houses do not adopt such an excellent routine. We do not know who was primarily responsible for this state of affairs in the "Globe" offices, but rather suspicion that Mr. Luther Allen "had a finger in the pie."

The freight market this week has fettered out and b rokers visit each other waiting for the lull to pass over. There are perhaps more wild carriers this year than last as it is generally conceded that a vessel earns more money by not being tied up to a season charter. Little or nothing has been done in ore, grain or lumber, although grain from Chicago to Buffalo was moving at 3¾ cents for wheat, 3½ cents on corn, Duluth tonnage was offered 4c., and some was placed, but in consequence of the low stage of water reported at the Soo, it is felt that five cents is little enough for a spring charter. More than half the tonnage now in Chicago is already placed, and there will certainly be a rush down in the first few days of the breakaway to get east.

CHICAGO, ILLS.

Special to the Marine Record.

Captain Duncan Corbett, of the schooner Waukesha, arrived here Friday, from Scotland, where he had been visiting his friends and relatives.

Captain John Keelin, of the sehooner Resumption, is away in Georgia for the benefit of his health. We hope soon to see him back again fully restored.

Captains E. W. Dorsey, Alpha Simons, and Murdoch Rowan were recently initiated members of No. 3 Chicago E. M. B. A.

The annual meeting of the Chicago Vessel Owners' Association was held at the Arbitration Committee Room at the Board of Trade Saturday March 5th. The following members were elected directors for the ensuing year: Wiley M. Egan, John Keith, James L. Higgie, C. W. Elphicke, William Walsh, Thomas Hood, and the following officers were elected by the directors: Wiley Egan, president; Thomas Hood, vice president; C. W. Elphicke, treasurer.

At Miller Brothers' Dry Docks the tugs Alert, Van Raalte and Welcome are in for general repairs; the steamer F. H. Prince, for re-calking bottom; the schooner Apprentice Boy for fastening and calking.

The schooner Horace Badger has had her sails and outfit put on board this week, and Captain Freer will soon commence to fit her out.

The schooner George Naughton will be painted and fitted out at once.

L. Windmuller returned Sunday from a business tour east.

George Warrington is building a 5x8 Warrington Water Tube Boiler, to be allowed 200 pounds steam pressure for the steamer Belle, of Michigan City, Ind. Also, a 3x4 boiler, to be allowed 250 pounds steam pressure for a steam yacht for Geneva Lake.

The Schooner Annie Dall was sold by Higgie & Walsh for David Dall's estate to Captain Michael Anderson, of Milwaukee. Consideration, $2,100.

John L. Crosswaithe, vessel agent, and Captains P Kenney and John Rice are here this week from Buffalo.

George Turner, of 3044 Archer-ave., the well-known vessel supply man, has fully recovered from the effects of a broken leg, and is getting his store ready for furnishing his old marine customers with the best meats and groceries.

Captain William Patterson, who lost the schooner Newsboy last December, will command the steamer W. P. Thew the coming season.

Captain Thomas Gunio will sail the schooner Riverside, of Green Bay, the coming season:

Eli V. Barry, chief engineer of the steamer Parks Foster, arrived here Tuesday from Muskegon to fit out the machinery of the Parks Foster.

Chris. Castle, chief engineer of the steamer Italia, was in Chicago Monday.

Thomas Mooney, chief engineer of the steamer Caledonia, was expected here Monday, but was detained at his home in consequence of the sickness of his wife.

At the Chicago Dry Dock Company's the steamer J. L. Hurd is in dock for a new stem, some new outside plank bulwarks and deck. James Bates, the company's foreman, has recovered from a sickness which kept him away from business about two weeks. We are glad that he is around again all right. James Mowat, the company's superintendent, left here Tuesday for Buffalo to assist Captains D. McLeod and Parsons in revising the Inland Lloyd's list of lake vessels for insurance purposes.

The following is a list of vessels chartered here during the past two weeks: Steamers Iron King, Iron State; barges Ashland and Newel Eddy, with wheat; schooner W. S. Crosswaithe, with barley; steamer Hadley, with oats; steamers John W. Moore, C. A. Eddy, D. C. Whitney, Aurora, E. C. Pope, J. H. Farwell, Elfinmere; barges Wayne, Rutter, and schooner Charles Foster, with corn, all for Buffalo; schooners Lem Ellsworth, Minnie Slauson, Sophia J. Luff, City of Sheboygan, George Sturges, Mary D. Ayer, with corn to Port Huron, and schooner Ada Medora, with oats, to Sarnia. Rates on corn and wheat for Buffalo, have ranged from 2¾ cents to 3¾ cents per bushel, and rates on corn to Port Huron have ranged from 2⅜ to 2⅝ cents per bushel. There was a good demand for vessels Monday and Tuesday of this week, and rates had an upward tendency; 3½ cents on corn to Buffalo was the price given on Tuesday.

A meeting of underwriters, insuring lake risks, will be held in New York on the 16th inst, for the purpose of considering the methods that have hitherto prevailed on the lakes in the adjustment and settlement of general and particular average losses, the growth and development of the carrying trade on the lakes, the large value represented, the increased size of the vessels now employed rendering it necessary that an effort be made to bring the settlement of the losses more within the lines of the law and the rules of maritime commerce, but with due regard to the different conditions under which lake transportation is conducted, and equitable consideration for the shipowners' interests in view of the same. The meeting has been called by the Home offices, and all the general agents of the Marine Insurance Companies have been requested to attend.

BAY CITY, MICH.

Special to The Marine Record.

Captain D. M. Pierce will command the steamer Metropolis of the shore line this season. She has been repaired and received a new steel boiler at Detroit this winter.

The tug Geyser, one of the best on the river, has been sold by the Tittabawassee boom company to Samuel Cornell and Patrick Devaney of Saginaw. She will be taken to Lake Superior for active service this season.

Captain John Jenkins and bride, nee Miss Nellie Anderson, have arrived home from their wedding tour. The bride is a Marine City lady. Captain Jenkins is master of the steambarge Newsboy, now in winter quarters at Port Huron.

The Detroit Dry Dock Co. closed a contract last week with the Eddys and Shaw of this city for the construction of a straightback steel steamer. She will be 360 feet over all, 342 feet keel, 42 feet beam and 24 feet molded depth. The cost will be about $225,000.

Captain James Davidson is in Buffalo looking after his vessel interests there.

Captain H. H. Bennett, of this city, late of the steamer S. S. Wilhelm, will sail the A. Folsom this season.

The steambarge S. C. Clarke has been purchased by Captain Baker of Detroit, from the Michigan Pipe Co. of this city. Consideration $8,000.

Work at the Bay City dry dock is proceeding vigorously at present and there is enough in prospect to keep the employes busy until the opening of navigation. The tug Music has been discharged from the dry dock and her place taken by the steambarge Burlington and tug Ella M. Smith. The Music has been rebuilt from the water line up. Her bottom has been given new planks where needed and she is as good as new. Her fantail is to be covered with a deck the same as that of the rebuilt tug Mocking Bird. The Music is now receiving a new compound engine, and a fine steel boiler. The former was made at the Marine Iron Works and the latter at the National Boiler Works. It is being placed in position today. The boiler is a large one being 14 feet in length, 9 feet in diameter with 11-16th inch shell. It is a fine piece of work and reflects great credit on the builders. The tug Ella M. Smith is to receive a new engine which is being built at Bay City Iron Works. The engine now in her will be put into the tug Rummage, now being overhauled at Wheelers. The Burlington is to receive steel arches and a new stern. The tug Sea Gull is lying at the wharf receiving repairs. She will have new decks and deck beams, new frames and ceiling aft, be entirely refastened and recalked and in fact will come out as good as new. This is the boat that by the breaking of her wheel got caught and was frozen in outside last December while on her way to Detour. Captain Reed was equal to the occasion however, had a new wheel put on out in the middle of the bay and brought her back none the worse for her mid-winter trip. Captain Lee DeLand has given his tug the E. V. Mundy almost a complete armour of sheet steel for ice work. She is as sound as a dollar and will be launched in a few days to make room for the schooner Montana which will be pulled out on the Marine railway for a rebuild.

The men in the steel department of F. W. Wheeler & Co. to the number of 350 struck last Thursday, because of the discharge of an old employe by a temporary foreman. The men are still out and probably will be until the return of Mr. Wheeler who is now in the south. It will delay the work on the new boats being built. The company are safe, as their contracts are made on certain conditions relieving them from all liability in fulfilling their contract by a certain time, in case of a strike.

J. P. R.

BUFFALO, N. Y.

Special to The Marine Record.

Buffalo lodge, E. M. B. A , has removed their headquarters to the large rooms over No. 356 Main St., a location which is much more central than the old rooms.

Capt. D. Sullivan and Capt. David Vance, of Milwaukee, were in the city Tuesday.

Maytham's tug office is undergoing a general overhauling preparatory to opening for the season.

The annual meeting of the Lake Carriers Association was held Thursday, March 3, in the secretary's room of the Board of Trade. But few of the managers were present and no business of importance was transacted. President Caldwell's annual report was read, and the association approved the bill appropriating $125,000 to begin a harbor of refuge at Portage Lake, on the east coast of Lake Michigan. The approval of the association was conditioned on the favorable report of a committee which was ordered to thoroughly investigate the matter.

The Northern Steamship Co. has moved into handsome quarters in the Potter block, on lower Main street.

Extensive improvements are being made in the Erie's dock terminals here. It is said $300,000 will be put into warehouses and other additions this season.

Next Monday the Tioga explosion case will be tried in the Supreme Court here.

Superintendent M. M. Drake, of the Lackawanna Line, has gone to California, and Capt. W. P. Henry, the Lehigh Valley manager, is in New York.

The Lackawanna fleet will probably be about the same as last year, though as yet the Newburg is the only steamer chartered outside the company's own vessels.

The Chemung has been undergoing extensive repairs in the Union dry dock. She will be out next week.

The Crystal Beach Steamboat Co. have purchased another excursion steamer. She is 123 feet long and 25 feet beam. She was built at Detroit in 1873 and has never until last fall, at least, had a rebuild.

The prospects are for lively times among the excursion boats at the foot of Main street this coming season. The landing facilities were most inadequate last year, but, with no more room and about twice as many steamers this year, it will be first on hand is the first to land, and not more than three boats can get up to the wharf at one time.

The Northern Line were the first to announce the appointments of the masters of their steamers for the season of 1892. Manager John Gordon is without doubt one of the most skillful line managers on the whole chain of lakes. The engineers of the fleet have also been appointed, but have not yet been assigned to their boats.

MANITOWOC, WIS.

Special to The Marine Record.

It is expected that some 100,000 tons of coal more than last year will be brought to this port by lake the coming season.

P. Olson, shipchandler, has found business pretty fair in his line on account of the number of vessels in winter quarters here. He has had considerable work done on sails and will supply a number of vessels with outfits before the opening of navigation.

The Manitowoc Steam Boiler Co. are building a boiler 5½x10 feet of 7-16 steel, to be allowed 150 pounds steam pressure for the tug Peter Coates; putting a new fire-box in the boiler of the tug Albatross; building a boiler 11 feet long by 12 feet diameter for the steamer building by Rieboldt, Wolter & Co., ship-builders, Sheboygan. It is of steel ⅞ of an inch thick and will be allowed 150 pounds pressure.

The Goodrich Transportation Co.'s steamers Virginia, Indiana, City of Racine, Atlanta, Chicago, Sheboygan and Muskegon are undergoing general necessary repairs and being put in first-class condition for next season's business. On the steel steamer Virginia the duplex air pumps are being replaced by the Knowles compound air pump, and the Howden system of force draft is being applied to the boilers, which changes are expected to increase her power 35 per cent. Some slight alterations in the cabins for the comfort and convenience of passengers will be made. A very powerful search-light will be placed on her foremast, by the aid of which small objects can, it is said, be plainly seen at a distance of two miles, it is of French manufacture and the same as those used on the first-class cruisers of the navies of the world and is the first of that class to be used on any passenger or freight steamer either on the lakes or ocean.

WILLIAMS.

SHEBOYGAN, WIS.

Special to The Marine Record.

The steamer building by Rieboldt Wolters & Co., Shipbuilders is planked fastened and has her deck beams in Her dimensions are 185 feet over all, 35 feet beam, 11 feet hold, engine is a new style of English type, high pressure cylinder 16 inches, low pressure cylinder 43 inches, stroke 36 inches, wheel 9 feet 8 inches diameter, by Sheriffs Manufacturing Co., Milwaukee, boiler 12 feet diameter 11 feet long of ⅞ steel allowed 150 lbs steam, Conrad Starke's new design building by Manitowoc Steam Boiler Works. The steamer will have a water bottom 30 inches deep from floor to bottom a new departure in wooden tonnage. She will be extra heavy strapped, one strap around her at the rail will be 24 by ⅝, diagonal straps 8 by ½ inches 30 on each side crossing each other in the middle and on lower end rivetted together with hot rivets. She is expected to carry 750,000 feet of lumber. They are also building a tug 66 feet over all, 14 feet beam, 7 feet hold for Henry Van Ells & Co., Milwaukee. She will have an engine 14 by 16 by Sheriffs Manufacturing Co. and a boiler 5 feet 3 inches by 10 by Johnston Bros., Ferrysburg. She will be launched this week and will be named the P. Reckinger. The firm are also building a dump scow 96 feet long, 24 feet wide, 8 feet deep, to carry 220 yards, also a dredge 75 feet long, 28 feet wide, 8 feet deep for the Racine Dredging Co. They have closed a contract to build a fishing tug for Gerhard Muntinga, Sheboygan, 55 feet long, 13 feet beam, 6 feet hold. They have done considerable repairs on vessels in winter quarters here.

WILLIAMS.

DULUTH, MINN.

Special to The Marine Record.

The crews this week fitout three of the big boats laid up here for the winter. The boats have been lying here light and will be fitted out so early as this in order that they may go to elevators to load grain. Capt. Inman has received orders to get the tug Record ready for business at a very early date, and the famous ice breaker will cut a passage for these boats to the elevators. They load, I believe, at 4½ cents a bushel.

Ice in the lake is very weak, and cutting for ice-houses has just begun; this, too, is so close to the shore that the board of health forbids the use of the ice cut for any but storage purposes. The ice is only about 8 inches thick at the shore and less than a mile out is too thin for safe passage by teams, and is daily wearing away. Already in the bay teams have broken through. This thin skin of lake ice extends only about 10 miles down the shore, and any heavy northeast storm would break it up. So the prospect for an early opening of navigation here is flattering, and reports from the Sault are to the same general effect.

The death of Andrew J. Sawyer, head of the great grain receiving and shipping house of A. J. Sawyer of Duluth and Minneapolis, and of the firm of G. G. Barnum & Co. of Buffalo, has cast a gloom over trade and shipping circles here. Mr. Sawyer was the first president of the Duluth Board of Trade and had extensive interests in country elevators in North Dakota and a terminal system here.

Dealing in mining stocks and the organization of mining companies has included a number of heavy grain men as well as others in every walk of life. The latest and one of the largest Mesaba Range Cos. has C. A. Pillsbury the great Minneapolis miller as director, A. D. Thomson the big Duluth grain exporter, as president, and several other heavy men in the business interested.

Crews for most of the local steam vessels, tugs, whalebacks, ferries etc., have been assigned and the work of getting ready for spring goes actively forward.

E. W. D.

LUDINGTON, MICH.

Special to The Marine Record.

Capt. John Duddleson goes this week to Buffalo to fit out the steamer George W. Roby. The Roby has a charter for 35,000 tons of iron ore from Ashland to Ashtabula at $1.25 a ton.

The steamer Marion, which is owned here, has also been chartered with iron ore from Escanaba, Mich., to Cleveland at 95 cents a ton.

Frank Costello goes as chief engineer on the steambarge Sopher. He left for Chicago this week to fit her out.

Marshall Costello goes as chief engineer on the steam-barge Colin Campbell, which laid up in Milwaukee.

Charles Hall goes as chief engineer on the steam-barge W. J. Carter, which laid up in Chicago, Ill.

The F. & P. M. Line of steamers are getting in some very quick trips. They have all the cars they want now to take away the freight as fast as the boats can get here with it.

Capt. William Young will sail the schooner Mars the coming season. He has been doing some repairs on her this winter.

Capt. Raimer Young will sail the schooner Conneaut the coming season, and Capt. Louis Sterling will sail the schooner Mercury; Capt. Mose Gerard and Engineer Mike Rick will have charge of the tug J. P. Hall this season. Capt. Chris. Hanson will take charge of the steambarge M. F. Butters.

Capt. William Robinson, who has been master on the steamer F. & P. M. No. 2 for some time, will leave this week for Manistee to fit out the steamer Petoskey which he was master of last season. Ed Rowe will go with him as clerk on the Petosky.

NESTOR.

PORT HURON, MICH.

Special to The Marine Record.

It is reported that Capt. Foote, last season master of the Athabasca, will command the steamer United Empire. Capt. Robinson has been appointed master of the steamer Monarch. Capt. William Simes will sail the steamer Seguin this season.

Charles D. Thomson of this city has made the following appointments: Steamers, Roanoke—Capt. Marten; George E. Brockway—Capt. R. Thomson; A. J. Wright—Capt. Andrew Bounsh; M. F. Merrick—Capt. Wash Harrow; F. N. Stinewood—appointment not yet made.

It is reported that the case of W. B. Clark against the steamer Roumania for running into Clark's dock at Sarnia, has been settled, the Roumania paying Clark $2,500. Mr. Clark, at the time of the collision, wanted the Roumania to pay him $6,000.

Capt. Thomas Harbottle of this city will command the steambarge Hiawatha the coming season. Last season Capt. Harbottle was mate of the Gogebic. Capt. McDougall, last season master of the steamer United Empire, will command the C. P. R. steamer Athabasca.

George Charlton has been appointed engineer of the steamer Gogebic, and E. M. Murdock engineer of the steam-barge Hiawatha.

GRAND HAVEN.

Special to The Marine Record.

The Grand Haven Shipbuilding Co. are engaged in building a passenger steamer 115 feet long and 20 feet beam to the order of J. H. Webb, Cassopolis, Mich.; a fish tug 105 feet in length and 19½ feet beam for the Booth Packing Co., Chicago, also a fish tug for Rudock Bros., Frankfort, Mich., 85 feet long and 17 feet beam, the keel for another fish tug 75 feet in length and 16 feet beam will be laid to the order of the Booth Co.

Considerable repair work has been done on the vessels wintering here, and one or two have had repairs amounting to a rebuild.

H. C. Beeson visited the city this week taking orders for his marine directory, now about ready to come from press.

DETROIT, MICH.

Special to The Marine Record.

The excursion steamer Gazelle has been sold by W. A. Ashley and others of Detroit to J. E. Rebstock and others of Buffalo, for $9,500.

Gen O. M. Poe opened bids last Friday for contracts to supply valves and valve frames for an 800-foot lock in the Soo Canal. The General commented on the wide difference of opinion, as evidenced by the tenders, which ranged from 9.6-10 cents to 30 cents a pound. J. B. McGuire bid 9.9-10 cents, the lowest received. The other bids were as follows: King Iron Bridge Co., Cleveland; W. C. Colburn, Detroit; Southward Manufacturing and Machine Co., Philadelphia; Russell Wheel and Foundry Co., Detroit; Wicks Bros., East Saginaw; Globe Iron Works Co., Cleveland.

Eddy Brothers and Captain Shaw of Bay City have contracted with the Detroit Dry Dock Co. for the construction of a steel steamer 363 feet long over all, 42 feet in beam, and 24 feet in depth, at a cost of about $335,000. This steamer will be about 25 feet longer than the E. C. Pope, owned by the same company and built by the Detroit Dry Dock Co., which at present is the biggest carrier on the lakes. The new steamer is to be of the "straightback" model, that is, without sheer.

FLOTSAM JETSAM AND LAGAN.

Thirteen feet six inches is the depth of water now reported at Sault St. Marie.

Capt. Elmer W. Craine, late of the steamer W. H. Wolf, whose escapade at the close of navigation at Buffalo gave him unpleasant notoriety, is said to have been in Detroit and Chicago recently.

The Richeleiu & Ontario Navigation Co.'s new steamer which is now being built at New York will be called the Columbia. Her route will be between Kingston and Montreal and according to the contract she will be ready on the 15th of June.

Fitzgerald Brothers, of the Port Huron Dry Dock Iron Works, have purchased 200 feet frontage on St. Clair river, midway between the two new Dry Docks, and as soon as spring opens, they will begin the erection of their building, which will be of brick. The machine shop will be 50 by 50 feet, foundry 50 by 50 feet, and boiler shop 50 by 100 feet.

Three hundred steel workers at Wheeler'r shipyard walked out of the yards last Friday because one of their number had been discharged for shirking. The strikers asked that the man be either taken back or the foreman discharged. The company refused their demands and work on the four government lightships and the big steel freighter looked like being delayed. Matters were finally adjusted and work is now proceeding.

Lumbermen of the Portage lake district, who are forbidden the use of the Portage lake canals for floating logs to Lake Superior, have petitioned the Secretary of War to modify the order, so as to permit them to get a half million dollars' worth of pine, already cut, to the market.

Cheboygan, Mich., has now been made a full station of the Weather Bureau, and besides displaying wind signals, full observations of the weather will be made. Black River, Mich. will hereafter repeat Alpena wind signals, having been made a repeating station. These changes have been made exclusively for the benefit of the lake marine during the season of navigation.

It is expected that lumber freights from Bay City will open at $2 to Buffalo and $1.75 to Ohio ports.

Correspondence.

☞ We do not hold ourselves responsible in any way for the views or opinions expressed by our correspondents. It is our desire that all sides of any question affecting the interests or welfare of the lake marine should be fairly represented in THE MARINE RECORD.

WILL REACH THE TUG.

CLEVELAND, O., March 4 1892.

To the Editor of the Marine Record.

I worked out Capt. Henrich's tug problem last week, but thought no more about it until I noticed the great variety of answers in THE MARINE RECORD.

As none of them coincide with mine, I venture to send it in.

1. NNW 36 miles, thence NE by E 384¾ miles = 420¾ miles.
2. N by E ¾ E 59 miles, thence NE by E 265½ miles = 324½ "
3. NE ¼ E 265 miles.

A CORRECTION.

TO REACH THE TUG.

CLEVELAND, March 8, 1892.

To The Editor of the Marine Record.

My reply to the tug problem in your issue of March 3 will stand a correction, as follows: First course, B would have to sail 420¾ miles in 38.25 hours. Second, B would sail 324½ miles in 29.50 hours to overtake A, and on the third course 280½ miles in 25.50 hours. The foregoing solution I believe to be correct as to time and distances. If not, I should like to see some other man shaping the courses. S. W. G.

TO INTERCEPT THAT TUG.

BUFFALO, March 2, 1892.

To the Editor of The Marine Record.

Enclosed you will find the three solutions to Mr. Henrich's example published in THE MARINE RECORD February 22.

Direct course, tug B. would steer from where she met vessel NE. ¼ E. 275 miles to intercept Tug A.

Course 2, B. would steer NNW. 36 miles to where vessel passed A., then steer NE. by E. 384¾ miles to overtake A.

Course 3, B. would steer from where she met vessel N. by E. ¾ E. 60 miles to where A. would be at the time B. met vessel, then N. E. by E. 269½ miles to overtake A.

HOW TO REACH THE TUG.

SARNIA, March 4, 1892.

To the Editor of the Marine Record.

Solution to Frank Henrich's Tug Problem: Tug A is 76.5 miles ahead of tug B when chase commences, viz., 36 miles S. S. E. from where located by sailing ship and reported sailing N. E. by E. 9 miles per hour.

Tug B would have to sail as follows, to overhaul tug A:

	Time.	Course.	Distance.	
1st.	38.25	N. 22° 30′ W.	36.00	= 420.75 miles.
	Hours.	N. 56 15 E.	384.75	

B could sail as follows to overtake A.

	Time.	Course.	Distance.	
2nd.	24.21	N. 24° E.	59.2	
	Hours.	N. 56¼	266.31	= 325.51 miles.

B to shape his course from his first point of departure, viz., at where he spoke to sailing ship, etc., so as to intercept A, would have to steam as follows:

3rd. N. 48° 50′ 25″ E. for a distance of 273.78 miles = 24.8890 hours. Tug A has sailed N. 11° 15′ E. since B started in pursuit for a distance of 224.00 miles = 24.8888 hours.

Solution of last course and distance: Having ascertained distance sailed by tug A from point hailed by sailing ship to be 264.5 miles, also course and distance sailed by sailing ship to point of B's departure = 36 miles S. S. E., making angle with tug A's course 101° 15′, giving triangle of two sides and included angle to find angle and third side. * * *

The tugs would be together before reaching the vertical point of intersection shown in accompanying illustration, owing to their breadth of beam. I assume the first point of contact for my answer. CANNUCK.

LET US HAVE SOMETHING FRESH.

MILWAUKEE, WIS., March 8, 1892.

To the Editor of The Marine Record.

As "Beginner's" problem yet seems to disturb the minds of some of your contributors, allow me to end the matter by quoting the following plain figures. "Beginner" names his altitude and declination correct, wherefore I presume he gives his declination corrected for longitude, but as the altitude is not corrected for semi-diameter, I conclude he wants us to understand it is corrected only for index error. The simplest way to solve the example is by the reliable method of "finding the hour angle," which can always be found when latitude, altitude and declination are known, thus:

⊙ Alt.	4° 50′ 00″	T. Alt.	4° 52′ 14″	
Ref.	0 10 10	Lat.	47 1 00	Secant. = 0.16635
	4 39 50	P. D.	97 9 00	Secant. = 0.00339
Dip.	0 3 49	Sum.	149 2 00	
	4 36 1	½ Sum.	74 31 00	Cosine. = 0.42644
Par.	+ 00 9		4 52 00	
	4 36 10			
Sem. Dia.	0 16 4	Rem'der.	69 39 00	Sine. = 0.97201
T. Alt.	4 52 14			H'r. An. = 0.56819

Log hour angle = 4 hours 59 minutes 4 seconds—1=4 hours 59 minutes, reduced to arc = 74° 46′ 00″. ⊙ bearing S. 74° 46′ W., or W. 15° 14′ S.

And now allow me to introduce the following problem as an exercise in working a Mercators chart, the problem to be solved by construction partly:

The steamer Westover left San Francisco, Lat. 37° 48′ N., Long. 122° 26′ W., on the 21st of February, 1889, at 3 hours 16 minutes P. M. local mean time, with orders to take the shortest route for Yeddo, Lat. 35° 40′ N., Long. 140° 0′ E.

On March 8th at 10 hours 45 minutes A. M., local mean time, a steamer arrives in San Francisco and reports that she has signalled the Westover on the 28th of February 6 hours 30 minutes P. M., apparent ships time, in Long. 151° 12′ W., and having after their meeting steered true course by Mercators Chart until arrival.

1. What latitude did they meet in?
2. What course had the Westover been steering from San Francisco to point of meeting, and what course should she continue on?
3. When should she be due in Yeddo at the rate of speed she, to that time, had been running at?
4. What had been the average speed of the other steamer?

ADOLPH L. FRIETSCH.

THAT TERRIBLE AZIMUTH.

BUFFALO, March 7, 1892.

To the Editor of the Marine Record.

That azimuth,—yes, that Ashtabula azimuth, will it ever be solved. The nautical season is fast approaching, and old Jamaica will soon shine on the north side of the fence, and this mysterious azimuth is never solved.

Beginner required the deviation of his compass and how to apply it, and in every issue of your valuable columns since the ne'er to be forgotten 28th of January, this azimuth has been box-hauled, club-hauled, par-buckled and keel-hauled by the master minds of (Sailor on Deck), Student, Observer, Spectator, Looker on, Cannuck and others, and yet Beginner has not been informed how his compass needle pointed in relation to the true meridian, and according to statements in the columns of your valuable paper, and by the above named authorities (Sailor on Deck) and his solution and method, has been their targets ever since apparently, were it not for his (Sailor on Deck's) statements and English navy methods, Beginner would not be dangling in suspence between N. and S.

Therefore, read ye, all whom it may concern, that with due respect and justice to my learned instructors, I will endeavor to explain, sustain and defend my statements and method well. In THE MARINE RECORD, January 28th 1892, Beginner's example was in substance thus: October 11th 1891, latitude 47° 01′ N., altitude 4° 50′, sun's corrected declination 7° 09′ S., on what point of the compass did the sun bear at that time, and concludes with suggestion that the answer should be reckoned from the north.

Hence, the keel-hauling etc. In reply I endeavored to solve Beginner's example as far as practicable confining myself to the example as given, I claim the honor of doing so, and I found the sun's true azimuth to be S. 74° 06′ 02″ W. and no other, on the given date and place of observation. Now I did not understand that the elements given in the example required any corrections, but it appears to me that Beginner is a descendant from the king of whom we read in the good book who demanded his subjects to tell him his dream and the interpretation thereof. Mr. F. Henrich endeavors to console Beginner, and informs him how the sun ought to have bore by his compass, by applying all the corrections to the given altitude, assuming a dip of 15 feet and other corrections out of the nautical almanac, such as parallax, refraction, and semi-diameter and finds the true altitude of the sun's center, then he assumes a variation of 2° E., then tells Beginner how the sun ought to have bore by his compass, not how it did, but the answer is, how it ought to have bore.

Such methods as the above are as intelligible to me as the good old king's example, and I must confess, try all my skill, I find it still just what I found before, S. 74° 06′ 02″ W., and the end is not yet, another beauty states that an azimuth can be reckoned either N. or S., that the method used by (Sailor on Deck) is in general used in the English Navy, add that F. Henrich's method must be given the preference to all others, being easier remembered and less liable to errors. In reply I beg to differ with my nautical friend, and at a loss to know why he did'nt explain this great advantage gained by turning around and reading an azimuth from the opposite point of the horizon. Now I appeal to the common sense of the readers of this article, and ask you what can be more simple, more easy remembered, and less liable to confusion and errors,—nay, more rational, than to read or reckon an azimuth from the point of observation, and where is the gain or facility of about-ship and reading or reckoning it from the opposite point of the horizon. This I wish my critics to explain, and furthermore I ask you, if Beginner had waited till the sun was in the west horizon and required the sun's true bearing by amplitude, would your critics tell him to reckon the answer from the east, and then sustain your assertion by simply saying it is easier to be remembered and less liable to error than that English Navy method.

Now I trust that each and all of you will be so obliging in the future as you have been in the past, and give all concerned, myself included, the why and wherefore you gain this great advantage, and a simpler, more easy remembered and less liable to error method, unknown to me and my instructors. Moreover, before I dismiss you, I will state for your benefit, that whatever methods are used or adopted in the English Navy, you will never be misguided by adopting the same, carefully study, faithfully apply it without fear, favor or bigotry and you will never regret or find yourself out of reckoning. In conclusion, I am sorry that I put my finger in this Ashtabula azimuth. I trust Beginner has obtained the desired information, and confessing it to be more than I am equal to impart under the circumstances, I trust that you all have realized that the failure is not absolutely due to my incompetence.

A SAILOR ON DECK.

REMINISCENCES.

SOMBRA, ONT., March 7th, 1892.

To the Editor of The Marine Record.

It is some time since I submitted my official log book for inspection to THE MARINE RECORD and it looked for awhile recently as if I had made my last cruise around the long boat, for, while stowing away my summer supply of ice I was attacked with cramps (not rheumatism) so badly, that I headed a fairly good course for "Fiddlers Green" all standing. However, they did not close the hatches on me quite, I'm not yet stowed away, indeed, I keep well to windward every watch on deck, though I confess to a little hankering after the eight bell music when it comes my temporary watch below.

I notice from time to time THE RECORD speaks of Captain William B. Guyles, of Cleveland. In 1844 he was sailing a brig and lay at anchor one night just below Amherstburg, I had been discharging a cargo of lumber at the dock and at 10 p. m. got under-weigh, with a light northerly breeze. I tried to clear the brig but with more drift than headway in the current got foul of her. I supposed that I would have quite a large bill to pay and when Captain Guyles came on deck I stood by for a raking over, but nothing of the kind, after assuring him I would pay the damage, he said wait until a repair bill was sighted and himself and crew went heartily to work to clear the fouled vessels. A month later I went to see the captain in Cleveland and took money along with me to pay the bill, he told me it was $1.50.

Captain Guyles has always been my friend and when I went to England to pass the Board of Trade so as to secure a certificate entitling me to sail a British registered vessel, he gave me a splendid recommendation as a sober industrious man, this was also signed by Mr. Tisdale manager of the Mercantile Insurance and bore the seal of the company.

In the fall of 1866 I arrived in Cleveland with the schooner Narragansett loaded with wheat consigned to the city mills, Mr. Harvey wanted the wheat left in the vessel for winter storage, paying for same and discharging her free of cost in the spring, they also had four other vessels loaded and desired to have a responsible man appointed to take care of these vessels loaded and desired to have a responsible man appointed to take care of these vessels and their cargoes, Captain Guyles was spoken to and he requested them to hire me, I received $60 per month for five months, besides I sparred and fitted the rigging for two new vessels and was allowed $3 per day for that work, Mr. Harvey gave me a loft free from rent and all this through the kindness of Captain William B. Guyles.

I have noticed in THE RECORD that Captains Tom. D. Grover and Carlton Graves are still to the fore, I knew them both, you also state that anchors are brought to the hawse now by electric power, that is certainly grand, but, my four footed crew have for some time used the power magnetic and can hoist their main peaks at a moments notice, without halyards and up so taut it lifts their stern in the air, I supposed sometimes they would founder head-first and forbid their using this purchase any more on pain of their being placed on the chart as lighthouses if they did: This same four footed crew acted very queerly just before the snow began to fly last fall and I puzzled and worried over the matter considerably, until finding out that they considered themselves slighted on account of Mr. Wade, Jr., not sending for them to mann his handsome ocean yacht Wadena, built by the Cleveland Ship Building Co., they kept their state rooms and would not be comforted.

Captain L. M. Coe of the Cleveland City Forge perused my last official log in THE MARINE RECORD and kindly entered my name on the list of subscribers to the Cleveland daily *Leader* for one year, gratis, besides writing me a nice long letter of several pages. Now, if there is anything a nonagenarian son of Neptune, a flat-footed, web-footed, "full and bye" navigator appreciates, it is just such an act as the foregoing and my heart is big enough if I only had the power to strike off a handsome and valuable memento inscribing on it the words—"A FRIEND TO THE SAILOR" and present it for just such thoughtful, manly, noble traits of character wherever found o'er this broad land. It lights a fellow along to his long watch below to think somebody cares for him and has patience enough in this work-a-day age to say so.

My sidelights requires frequent trimming and the binnacle lamp is burning dim so that I can hardly keep her head on, so I guess I had better heave-to for awhile, and will shake her out and give her sheet again after a rest. The water is low here and we have to go into the channel bank for deeper water. It has been "free trade" here but the bridge of ice is now getting poor.

CHARLES GALE.

IN MEMORY OF CAPTAIN WILLIAM HINTON.

ERIE, PA., March 7 1892.

To the Editor of The Marine Record.

A brief synopsis of the late Capt. William Hinton's career will interest many readers of THE MARINE RECORD. He was born in Newport, Wales in 1809, and ten years later the family emigrated to New York. They were landed at St. Johns, N. B., and before learning properly where they were, the vessel sailed away and was lost before reaching her next port.

The Hinton family reached Albany, N. Y., and the father, being a good blacksmith, money enough was saved to carry them to Erie Co., Pa., where they settled, and cleared the farm now owned by Stephen Davis.

Young Hinton soon showed his sturdy character; he commenced sailing when a mere boy and soon placed himself at the head of his profession. In 1845 he was chosen (out of 32 applicants) as pilot and navigator of the U. S. S. Michigan and held that position until 1875 when he received from the Secretary of the Navy. George W. Robeson, a warrant signed by U. S. Grant placing him in the list of warrant officers, and entitling him to pension.

Capt. Hinton was a total abstainer and held strong views on the drink question. The older lake mariners, now living, will remember his sterling, upright character, and THE MARINE RECORD often contained well-written articles from his pen.

Should any of the older members of the fraternity desire further particulars of his life, I should be glad to furnish them if you will let me know. ANON.

WHY THE NICARAGUAN CANAL SHOULD BE BUILT.

A correspondent of the Richmond *Dispatch* sums up the reasons why the Nicaraguan canal should be promptly built as follows:

The exceeding importance of the Nicaragua canal to our own country and to the world is no longer a matter of opinion. It is a great, overwhelming and indisputable fact.

1. The voyage of Columbus, 400 years ago, was to discover a near way from Europe to the East.

2. Since his time all the leading nations of the world have been studying and working for a water passage over the Isthmus.

3. Our own country has now the engineering problem solved and the franchise, the power and control of this passage in her own hands.

4. The Nicaragua canal is of more consequence to us than the Straits of Gibraltar to Western Europe.

5. It places all the ports of our country in comparatively near and easy intercommunication.

6. It gives to our Pacific coast a near and ready transportation for its grain, its fruit, its woods, its minerals, and all its inestimable wealth to the Eastern markets of our own country and of Europe.

7. It doubles the efficiency of our navy and makes the defences of our ports ready and sure.

8. It places our country in the best possible position to take and maintain the supremacy of the Pacific ocean.

9. It doubles the availability of our coast line vessels trading from port to port.

10. It gives our Southern and Eastern and Middle States great advantages in trading with the western coast of South America, with Australia, and all the East and the South seas.

11. It turns the flow of the wealth of the Indies and the best trade of Europe through the Caribbean sea, near to our southern shores.

12. It promises incalculable advantages to the southern and eastern ports, in markets for our products, and in returns of invaluable wealth from all the Pacific countries.

13. It completes the circuit of our country and makes it one in interest, one in enterprise and one in empire as the center and supreme controlling power of the world.

14. The nature and outlook of the enterprise is such as to place it far above all sectional and party considerations. It is one for which all parties and sections may rejoice to work as fellow citizens seeking only the safety and prosperity of our common country.

15. The unanimous report of the Senate committee on foreign relations of last session, made up of the ablest lawyers and statesmen of both parties, was the strongest possible recommendation of the enterprise, and places it before the country as a great national enterprise.

For all these reasons it is earnestly hoped that our Representatives will do all in their power to help forward the work.

HEADING END ON.

Our newsy contemporary, "Fairplay," London, frequently lets in its well filled columns of news a little gossip, bon not, jen d'esprit, or whatever the following may be termed.

"A sailor with a grand pair of red whiskers dropped into a Stepney "pub." the other day. Finding some other seamen there he kept running his fingers through his whiskers so as to call astention to them. Going up to a weather-beaten old tar sitting on an empty cask in a corner, he exclaimed, "Say fren', there aint' norra finer set o' whiskers than these here in the Hugh Kay." "Ah!" rejoined the old man, "its only 'arf an objection I has to 'em," "'Arf an objection? Wotever d'yer mean?' "Well, that whisker on the starboard side oughter to be *green*." During the roar that followed, whiskers evaporated from the apartment.

BRITISH SEA-POWER "AT ALL COSTS."

To those who take a patriotic interest in the British navy and the maintenance of British trade routes and coaling stations we recommend a careful perusal of Capt. Mahan's fascinating volume on "The Influence of Sea-Power upon History, 1660—1783." Never, perhaps, was the maintenance of this predominating "sea-power" more necessary to us than at present. No Englishman can read this book without an ever-increasing conviction that British "sea-power" must be retained at all costs and against all combinations. British commercial supremacy has been attained through "sea-power," and by "sea-power" only can that supremacy be upheld.—*The London Chamber of Commerce Journal.*

And yet there are so-called patriotic Americans who frown down and work against, with all the power at their command, measures to revive the United States Mercantile Marine. Shipbuilding and ship-owning, handicapped through the ubiquity of British tonnage, is not to be assisted through judicious legislation, as that would amount to special privileges and class legislation! Out upon such notions of political economy in the face of what is being done by other maritime nations towards holding a representation of the world's commerce and national prestige.

A NEW WRECKING FIRM.

A new wrecking company has just been organized to operate at Sault Ste. Marie, Mich., during the coming season, besides having a more extensive outfit than usual stored at the above port ready for large undertakings and emergencies, a lighter of large dimensions has been purchased and fitted out with steam derricks and deck winches, a supply of patent flexible steel wire and manilla hawsers, six centrifugal pumps, submarine diving outfits, besides other modern facilities for wrecking and lightering under all circumstances.

It is learned that Capt. A. C. Chapman, who has been appointed the Sault Ste. Marie agent of the American Steel Barge Co., has put some money into the wrecking plant, and he will manage the wrecking and lightering operations in addition to his permanent business as resident agent of the Barge Company. Capt. Chapman is well and favorably known to all lake masters and there is no doubt but that he will meet with a fair share of patronage in this new enterprise, as he is associated with other well known ship-masters in the business of establishing a powerful and complete wrecking and lighterage outfit at "the gate" which controls Lake Superior commerce.

PALL THE CAPSTAN.

William Harman, a resident of Titusville, Pa., committed suicide a short time ago from a melancholy conviction that he was his own grandfather. Here is a singular letter that he left: "I married a widow who had a grown up daughter. My father visited our house very often, fell in love with my step-daughter and married her. So my father became my son-in-law, and my step-daughter my mother, because she was my father's wife. Some time afterward my wife had a son; he was my father's brother-in law and my uncle, for he was the brother of my step-mother. My father's wife—*i. e.*, my step-daughter, had also a son; he was, of course, my brother, and in the meantime my grandchild, for he was the son of my daughter. My wife was my grandmother, because she was my mother's mother. I was my wife's husband and grandchild a the same time. And as the husband of a person's grandmother is his grandfather, I was my own grandfather."

EXPOSITION BOAT-BUILDING.

The Bureau of Construction of the World's Fair Columbian Exposition has sent to boat-builders of this country specifications for about 40 small launches to be used to convey passengers around the Exposition grounds. Bids are asked for the building of these boats as well as for the privilege of running them. The fare for a trip is limited to 10 cents, distance of travel three and a half miles. The size of the launches are limited to 30 feet on the waterline, with a beam of 6 ft 6 in They must be clinker built and finished in natural wood with mahogany decks of fine furniture finish.

Fred A. Ballin, the naval architect and manager of the Detroit Boat Works, talking with our correspondent, expressed his opinion on these specifications in the following manner: "These boats will be the most useless things imaginable. Consider a crowd of thousands of people waiting on a dock to get a ten cent ride, and climbing aboard with a rush, such as we witness every summerday on our ferries, what will become of these playthings, not larger than a ship's yawl, and with less beam than an ordinary 25 ft. life boat, they will surely be cap-sized or tramped to pieces. As there will be 16 landing places it is out of question to have sufficient guards on all of them to control the crowd. It is ridiculous to furnish such crafts in polished mahogany, and an impossibility to make boats of this size, with only four horse power engines to run the distance of three miles and a half with a load of passengers in one hour, and make 16 landings besides.

But assuming that the launches were built, where is their their commercial value? We have on our Detroit River hundreds of launches, and the majority of them is about 20 feet long, but not one of them will carry over twenty persons comfortably, most of them less. As it will require an engineer to run the engine, captain, and at least one man to collect the fares and make fast to the docks, and the boats at the least could not make over 10 trips per day, where is the profit at 10 cents or even 25 cents per head?

And now another clause in the specification is discriminating against outsiders. With every bid a cheque is required on a Chicago bank of $10,000, payable to the World's Columbian Exposition. Why would a certified check from a Detroit bank with which we do business not be considered equivalent?

If my opinion was asked, I would say that these boats ought not to be less than 50 feet long with at least 12 ft. beam, to be made with flush deck, and to be fitted with either high pressure double engines or compounds, such boats could be made to run not less than 10 miles an hour, they could safely carry 50 to 60 passengers, and half their number would do more service than a 100 frail and crank clinker built, mahogany finished playthings.

I have been told that a certain landscape gardener, well, but not favorably known here in Detroit, is the party who assumes to dictate the size of boats to be used on the Exposition grounds Larger boats than 30 feet, he claims, would humble the surroundings. He probably had in mind the small machinery hall on the lagoon, under the roof of which our city hall tower can be wheeled through without touching.

ANNUAL MEETING OF THE LAKE CARRIERS' ASSOCIATION.

The annual meeting of the Lake Carriers' Association was held at the Merchants Exchange, Buffalo, Thursday. The attendants were Vice President Miller, Capt. William B. Henry, and Messrs. S. D. Caldwell, James Ash, William Livingstone of Detroit, James Davidson of Bay City, and Frank Owen, of Ogdensburg. Messrs. Bullard, Evans, Gordon, Hanna and Wilson were unable to attend the meeting. It was decided however, to transact the formal business of the meeting, leaving the two most important matters to be taken up at an adjourned meeting to be called April 1, by the secretary upon a week's notice and at a time when a large attendance could be secured.

A large part of the session was taken up with the reading of the annual report of the retiring president, Mr. Caldwell. Much of it was a review of the work of the past year. It recommended that a careful protest be drawn up against the passage of the obnoxious Frye Bill, and reiterated the denial that the association is local in its interests.

The secretary was directed to telegraph Senators Erwin and Endres, and Lieutenant Governor Sheehan, at Albany, protesting against the passage of the bill pending in the State Senate, incorporating a company to build a bridge across the St. Lawrence river at Wolfe Island. Mr. Owen, superintendent of the Central Vermont line of steamers, stated that a bridge at that point would be a very dangerous obstruction to navigation. Such a bridge, if once constructed, would remain there for all time.

The association also directed the secretary to prepare a brief protesting against the construction of a bridge across the canal entrance at Duluth, and a committee consisting of Messrs. Davidson. Livingstone, and the secretary was directed to attend the hearing at Detroit on March 21st., at which a board of government engineers will consider the advisability of permitting this canal to be bridged.

The secretary was directed to urge upon the river and harbor committee of Congress a proper appropriation to forward the work on the Portage Lake Harbor of refuge on the east coast of Lake Michigan.

Vice President Miller and the secretary were appointed a committee to prepare a protest against the Frye Bill revising the inspection laws and altering the provisions of law relating to the licensing of officers and crews as well as the rules of the road.

The proposition to delegate the work to four standing committees, two to be located in Buffalo and two in Cleveland, was taken up and discussed. These will be: First, a committee on finance, to whom shall be referred all matters relating to the finances of the association, and all other matters not falling within the scope of any of the other committees; second, a committee on rivers and harbors; third, a committee on aids to navigation; fourth, a committee on miscellaneous legislation, to whom shall be referred all matters relating to bills, measures and governmental rules, and regulations not falling within the jurisdiction of the committee on aids to navigation or the committee on rivers and harbors.

The three advantages claimed for this plan are as follows: First, it takes part of the burden of the work from the Buffalo managers; second, it calls the Cleveland managers of the association, who have large tonnage and great interests, into active participation in the association's work; third, it removes entirely any false impression which has heretofore gained ground that the Lake Carriers' Association is a local Buffalo organization.

The treasurer reported about $665 in the treasury, which is enough to meet all obligations to the end of the fiscal year, which ends on April 30.

The election of a new board of managers and the adoption of the proposed bylaws were laid over until the adjourned meeting.

A WRITER in the *American Miller* says: "If you could see into the boiler when under pressure, you would simply see the water bubbling and boiling at a great rate." Well, if he sees that, he sees something we never saw, and no one else ever saw. Water under pressure does not bubble and boil. We have seen a glass boiler under a pressure of six pounds per square inch, and the water was wholly quiet.—*The Engineer*, N. Y. City.

The Marine Record.

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☞ Subscribers and others are respectfully invited to use the columns of THE MARINE RECORD for the discussion of pertinent topics and all matters relating to the welfare of the Lake Marine. N. B.—We do not hold ourselves responsible in any way for the views expressed by our correspondents. Contributions must in every case be accompanied by the full name and address of the writer, and be at this office not later than Wednesday morning.

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CLEVELAND, O., MARCH 10, 1892.

THE new clause added to the duties of the local steamboat inspectors, whereby the examination of all candidates for licenses must be reduced to writing, is a step in the right direction. Hitherto, the examinations have been simply a verbal interchange of questions and answers The new clause requires the examination to be written and placed on file as an official record. This departure is a highly commendable one, and is a feature which ought to be extended to a general system of examining candidates, as opposed to the personal, and no two places alike style of to-day.

SENATE Bill No. 153, introduced by Mr. Gibson of Louisiana, and reported by Mr Frye with amendments, is to provide American registers for the foreign-built steamers Foxhall and S. Oteri, of New Orleans, La. In the face of the recent articles on American shipbuilding, showing that better vessels can and are being built in the United States than in any other country, the legislation asked for above ought to be severely sat upon. The recent convention of lake shipbuilders embodied such a clause in their proceedings, and as long as this country builds better ships than foreigners, none of the imported articles are required—not one!

IN the list of aids to navigation compiled and endorsed by the Vessel Owners' Associations, the Lighthouse Board seemed to have acted in a manner to prove that lake interests are in no way slighted. In their report to the House Committee out of sixty-four items the Board recommends fifty-one, and in wading through the entire bill $60,000 has been added to the amount of appropriations asked for. Commander Coffin, secretary of the Lighthouse Board, has been especially interested in the aids asked for. After consulting the reports of the district engineers, the Board recommends that a liberal appropriation be granted, so that the aids petitioned for might be got into active use at the earliest time possible.

CAPT. ALEX. MCDOUGALL, general manager of the American Steel Barge Co., denounces the reports emanating from Washington relative to the opposition of his company to the deep water channel he says:

"All the vessels under construction here in our yards are 25 feet deep, and the shoalest vessel that we own, with the exception of the 101, is 22 feet deep, our shoalest vessels requiring 17 feet of water, and the deepest vessels 20 feet for their maximum cargo; in fact there is no one or no other company so much interested in a deep water channel as we are. I think 25 feet is the deepest iron boat on the chain of lakes. There may be one boat that is 26 feet, but I do not know which it is. This newspaper man who drew his own conclusions, or who had some bitter enemy of the American Steel Barge Co. to help him, is entirely mistaken, and is certainly 'barking up the wrong tree' this time."

A VALUABLE series of statistics, showing the commerce, tonnage and products carried over the Great Lakes, is now in the hands of the Census Bureau for publication. To Special Agent Charles H. Keep, secretary of the Lake Carriers' Association, is the marine industry indebted for this compilation, which, in assisting beneficient legislation, is the greatest lever which could possibly be brought to bear. Ex-Senator Thomas A. Palmer stated at the Detroit Deep Waterways Convention that lake statistics in the past had been subject to contradiction, but, thanks to the Census Bureau, every element of uncertainty has now almost been overcome and these valuable statistics stand out pre-eminently in the commerce of the country. Major Brock, Chief of the Bureau, will, at an early date, have these all important statistics published and they will then bear all the weight of national records.

FROM the Census Bureau or some other reliable source we would like to ascertain the number of mariners engaged in active sailing service on the Great Lakes. If it comes to computing, we are equally as good at that as any known source, but, what is wanted, is official and undeniable statistics of the numbers shipped and discharged during, at least, one season of navigation. There is not a bureau, individual or source in the United States where such particulars or figures could be obtained. A calculation might reveal an approximate and then it would fall short in actual numbers of men employed and earning their living through the sailing industry. There is positive inertia and something like neglect to be overcome here! How would the appointment of a few shipping commissioners affect this loose way of shipping and discharging? What proportion of our citizens are engaged in the vast commerce of these lakes anyway?

THE time is approaching when an effort should be made to obtain an historical exhibit of lake relics for the World's Columbian Exposition. Unless a degree of interest is inculcated into the minds of our people there is a possibility of the section of the building dedicated to lake exhibits being somewhat sparsely furnished. In this connection, we would suggest that a committee of three be appointed to represent Detroit, Cleveland and Buffalo for the purpose of collecting and arranging such a display. Lieutenant Baker, U. S. N., the officer in charge of marine exhibits, points out that unless an effort is made to contribute and preserve all such relics they will rapidly disappear. In this guadri-centennial of the discovery of America all interesting heir-looms, frontier appliances in former use, lake marine relics and each noteworthy object, should be massed together. This collection would form a basis of a grand museum and illustrate the development of the domestic, commercial and shipping interest of the lake States from the days of Father Hennepin, La Salle, Joliet and other early pioneers of the far West.

THE Lake Seamen's Unions are directly opposed to the bill introduced by Congressman Clarke, of Alabama, providing for Government shipping commissioner for the lake ports, they evidently fail to see that all interests would be fairly subserved by the appointment of such officials, and imagine that their organization would be rendered nugatory. Such, however, is not the case, as whether shipping commissioners are appointed or not, the present organizations would be equally in force as they are to-day, in so far as shipping and discharging is concerned. It is only necessary to point to the Pacific coast, where probably the strongest union now extant flourishes, yet, a shipping commissioner is at the port of San Francisco to take cognizance of all matters affecting the employment of seamen, and the same is equally true in England, where a still more rigid system of shipping and discharging the crews of vessels is in force, and yet masters, officers, engineers, seamen and firemen have all their unions or what is equally the same, a class combination of interests. A discreet shipping commissioner stands aloft and acts impartially in all cases, not knowing officially any association, union or other combination of interests, nor is it within the scope of his duties to recognize only those who come before him for the purpose of shipping or discharging. Whatever the wages of the port is, and this is ruled by supply and demand, so will the commissioner witness the agreement between employer and employee and see that the terms of the agreement are faithfully carried out, of the commissioner this alone is the principal office and duty so there is little cause for disaffection on the grounds of unionism on any other combination.

LIGHT-SHIP COMMUNICATION.

A bill has been introduced in the House of Representatives by Mr. Cummings, to provide and maintain communication by telegraph, telephone, or otherwise, with light-ships, light-houses and life-saving stations on the coasts and shores of the United States, at such points as may be deemed practicable and necessary, in order to secure prompt information of vessels stranded or in distress.

The following sections in the bill direct the Secretary of the Treasury to institute experiments to determine the most effective means by which such communication may be made and maintained. Among the numerous measures beneficial to the mercantile marine now before Congress, there are few, if any, of more direct importance to the vessel owner and mariner than this measure, and it is to be hoped that a ruling fair wind will waft it through the halls of legislation to a complete enactment. Legislation in any way detrimental to the best interests of commerce meet with a perfect storm of disapproval, and our people are not one whit too slow in letting it be known that bills emanating from a diseased imagination or foisted upon a Congressman from an ignorant or designing source must be laid over. But what about widely beneficent acts, such as this Cummings bill? We venture to say, that from no private or formerly unknown source will congratulatory letters reach the Congressman, and yet, such missives would certainly strengthen the position of the legislator in his noble stand taken in behalf of the nation's commerce and those who carry it on.

The question of opening communication with light-ships and the shore is now occupying the attention of the English light-house departments, as it has done for several years past. A successful method for general use has not yet been determined on, but, there is no occasion for the United States to wait and adopt a system introduced by any other nation, rather let us devise our own ways and means to accomplish this desirable result.

The isolated light-houses and the few light ships that are now on the lakes might render inestimable benefit to the lake commerce through being connected with the shore, while a wire to each light-house ought to be considered as part of the equipment in all cases where reports of accidents in the locality would be of value to the vessel owner, wrecking and towing companies and other interested sources.

THE TWENTY FOOT CHANNEL.

Representative Whiting, of Michigan, evidently wishes the citizens of Port Huron to imagine that his recent protest against the twenty-foot channel is to their interest.

It is possible that the Grand Trunk Railroad would desire to make Port Huron the natural terminal of the deep waterway, and a square, flat-footed assertion to that effect would reveal an interest at issue.

Mr. Whiting has given an impression at Washington that Port Huron is the actual and geographical deep water terminal from the upper lakes. The fact is, that he either knoweth not of whereof he speaketh, or that he deliberately prevaricates, for it is an indisputable fact, as a glance at the chart can easily prove, or a moment's consultation with a shipmaster may verify, that for a mile from the mouth of St. Clair river there is very little more water than there is at Grosse Point on Lake St. Clair, and the former portion of navigation is by far the most dangerous, as the bottom is composed of large boulders, which have caused more extensive damages to boats and cargo than the entire strandings throughout the river or from Lakes Huron to Erie.

This total rejection of the rights of commerce by Representative Whiting ought to make his rejection from Congressional honors a final result, and in this connection we would whisper one talismanic word in the ears of the marine community actually engaged in the sailing interests. Vote! Here is one of your own representatives desiring you to keep pounding the bottoms of your commands, getting yourselves into trouble with the old cry of being off the ranges, and in the end ruining the reputations of the principals in each end of the boat, and all this is done under the shadow of being your spokesman at Washington.

Now, let measures be taken to permit of lake seamen voting by proxy, by oath, or affirmation within thirty days, on, or before the closing of the polls. Farmers also would hold their rights of representation better conserved if such a method could be legalized, however, for the tillers of the soil we can't vouch, but, the ploughers of the waters are eminently and specially subservient to the duties of their calling and there is little justice in dis-franchising so large a body of intelligent voters simply because their occupation is imperative as to time and place—Out upon Mr. Whiting's method of obtaining a result, Port Huron is no more the geographical termination of the deep waterways than Sault Ste Marie is, for either up or down bound fleets, and no amount of illogical speechifying ought to exercise the slightest bearing on this important question.

LAKE HULL AND CARGO INSURANCE.

It should be highly gratifying to the lake interests at lsrge to note that a continuation of the Inland Lloyds Vessel Register is now assured. There was a time, in the near past, when this desirable result seemed to waver in the balance and even a light influence would, in all probability, have left the lake insurance companies no guide but last year's valuations to base their 1892 risks upon.

On March 1st an informal meeting of representatives of companies insuring lake risks was held in New York for the consideration of and exchange of views concerning the methods that have hitherto prevailed on the lakes in the conduct of the business of marine insurance, both hull and cargo. The extent to which the British and other foreign companies have walked into the lake underwriting and the efforts put forth to absorb the "gilt edged" risks, has at last awakened our people to a true sense of the commercial importance of this business, and

as we have frequently stated in the columns of THE MARINE RECORD, where there is money to be made by the foreigner in placating the assured, so also must there be in Americans conducting their own business, if based on the same lines of economy in the management of agencies.

The growth and development of the carrying trade on the Great Lakes, which, according to official documents, Custom House figures, Census Bureau reports, and the general mass of published statistics, is becoming an enormous factor in the internal commerce of the nation, and these facts have, no doubt, brought this matter directly to the notice of the home offices, with the gratifying and patriotic result that home business talent has taken umbrage at the invasion of these fields by foreign companies and are now moving in a body to offset the inroads already made and to prevent the leakage from assuming larger proportions.

There can be no good or valid reasons why the assurer operating in and under the several state laws should not gain a wider hold upon the assured than a comparative interloper who is not amenable to a state law or responsible to the country for his or their underwriting. Given an English Lloyds policy with perhaps the names of several score of underwriters on it, and it would be a tedious work of litigation to derive from each the amount involved in the policy in the event of a warfare between the assured and the assurer. Of course, if judgment was given against the first name on the policy the remaining signers would be placed in the same category, but to accomplish this end it would probably be necessary to cross the water, however, there can be no good end served by anticipating litigation of this sort and nothing has yet occurred to mar the business of placing risks abroad, unless, perhaps, the rousing of our home offices to a realization of the business within their grasp may do so in the near future. Certain it is, that the enormous lake interests should be conserved and the business placed in such a shape that the established companies can look on the field as a legitimate and probably lucrative one, and that the practice of former years, of companies coming in simply for a season's business may be done away with, so that the assured can feel that the companies engaged in this business appreciate its size and magnitude and that a closer relation should exist than is now apparent between the assured and the companies, and that the assured may look upon these companies engaged in the business as being in the field permanently.

It is probably with this, or a similar end in view, that the meeting to be held in New York on March 16th has been called, and all the companies engaged in the lake business ought certainly to be well represented, and no doubt will be, so that steps may be taken to have the business of lake underwriting placed on a sound footing. Owners of floating property would then feel that their rights had been duly considered and that their interests, as well as the interests of the established insurance companies, would be benefitted by the results of this most important meeting.

It has long been palpable to us that unless positive measures were soon taken the business of lake underwriting, both on hulls and cargoes, would pass into other hands. The New York offices have undergone such a change and the next move would have absorbed the lake business also. It is, therefore, the plain duty of every general agent doing business on the lakes to attend this meeting of underwriters, from whose deliberations a pronounced effect may be expected on the lake underwriting.

HOW DOES THE TREATY STAND.

The Treasury Department some time ago made an official inquiry as to the character of the new revenue cutters now being built at Owen Sound, Ont. In an official report to the Treasury Department an officer of the Revenue Marine Service, stated that the Constance is the type of a number of vessels about to be built. Dimensions are: length, 125 feet; beam 19 feet 3 inches; draft, 9 feet; engines of the single screw, vertical compound type, cylinders measuring respectively 18 and 36 inches; stroke, 24 inches; battery, three Nordenfeldt rapid firing guns. The Constance has a ram bow. Two vessels of the Constance type are now afloat. This type of vessel is more formidable than any of the revenue cutters of the United States, and the fact that England is building these semi-warships for the lake service has not escaped official attention. The Dominion officials are positive that the building of these vessels does not in any way conflict with the terms of the 1817 treaty. The United States officials ruled that even a practice vessel for the U. S. N. should not be built in Michigan without violating the terms of the treaty. Wherein lies the gist of these divergent views?

A HANDY DRY DOCK.

While the fire boat Chicago No. 58, located at South Chicago, was breaking ice a short time ago, she tore off one of the steel sheathing plates forward. Instead of going to a dry dock as customary, the crew looked for a place to build their own dock. They found a spot that was a clay bank cut in about ten or fifteen feet. They at once ran her bow into this gap, and banked the clay aft of the torn-off plate, dropped one of their big syphons into the hole, and as soon as the water was out spiked the plate on and got back to their quarters in less than three hours. This speaks well for the Chicago Fire Department's Marine Company.

THAT TWENTY-FOOT CHANNEL, ETC.

TORONTO, CANADA, March 7, 1892.

To the Editor of The Marine Record.

To my last letter you kindly made a note saying that I had forgotten the free transportation through the St. Clair and Sault Canals. No, but what a small concession compared with the vast benefit which our canals are to American shipping. were it not for the Welland and St. Lawrence canals American large vessels from the lakes could not reach the seaboard, except after a great outlay of capital and labor.

The St. Clair Flats Canal, again, is on Canadian soil, and it could be closed by our government did hostility so dictate. The United States Sault Ste. Marie Canal, though at present a highway for Canadian shipping will not long be so, for soon the Canadian Sault lock will be open. There will be traffic enough for both canals. No doubt the governing of the American Sault lock is an applaudable credit to the people of the State of Michigan, and shows their good sense in not making any discriminatory laws. It would be better if more of a like spirit of amity were displayed on the great international inland waterways. I am no breeder of animosity, most especially between nations whose natural, geographical, linguistical, and intellectual affinity is so plain. But why should all the advantage be on one side, and that with the most powerful factor? As a marine man remarked to me the other day: "The granting of free transportation for Canadian vessels through the St. Clair and St. Mary Canals is as the offer of a sprat to catch a salmon." Wherever the United States Government has complete control of the waterways, and can see no advantage accruing from freedom of passage, they refuse to permit a highway for Canadian craft, which you will admit, but they are not reprehensible for doing so. They benefit their own citizens. Would that the Dominion Government saw administration in that light oftener.

The Canadian parliament is in session and seem to be shaping a proper course with regard to marine matters. Hon. Mackenzie Bowell has given notice of a bill to amend the salvage and wrecking laws, and to obtain desirable reciprocity in wrecking with the United States, whilst Col. Denison, a member for Toronto, proposes to move that the Soulanges and other St. Lawrence Canals be deepened to 20 feet. The Colonel's contemplated motion does not include the Welland Canal, as he is looking chiefly after the advantage of Toronto. Let us hope that United States Congressman Whiting will not influence Canadian statesmen by his recent action.

The source of some of the opposition to the deepening of the Welland Canal may be guessed when it is noticed that Mr. Davis has introduced a bill in the Ontario Legislature to incorporate David Blain, H. H. Cook (lumberman), John C. Fitch, Hugh Blain (merchant), Joseph Blakeley accountant), all of Toronto; E. L. Corthell of Chicago (engineer) Mark H. Irish of Toronto (broker) Kivas Tully of Toronto (engineer), and William Bell of the town of Sault Ste. Marie (engineer), under the name of "The Ontario Ship Railway Co.," with power to construct from some point on Lake Ontario to some point on the Georgian Bay or Lake Simcoe, or to both Georgian Bay and Lake Simcoe, one or more tracks of railway for the purpose of carrying passengers and freights and conveying vessels, barges and other water craft and their cargoes from the upper lakes to Lake Ontario, or *vice versa*. The capital stock of the company is placed at $75,000 to the mile of single track, with power to increase. The bonding capabilities of the company are limited to $75,000 per mile of single track. They shall have power to construct a telegraph and a telephone line in connection with the railway, and may build works for generating electricity for lighting and motive power. If the construction of the railway is not commenced and ten per cent of the amount of capital is not expended therefore within five years after the passing of the act, and if one single track of the railway is not finished and put in operation in ten years from the passing of the act, the corporate existence and powers of the company shall cease. The opening of this line certainly will not add to the trade done at Buffalo, Cleveland, Toledo or other Lake Erie ports; nor will it benefit Detroit or any lower Lake Huron ports.

JOHN A COPLAND.

LAKE SHIPBUILDING.

In an article, "The Water Route from Chicago to the Ocean," in *Scribner's Magazine*, Lieutenant C. C. Rogers, of the United States Navy, says, speaking of the work performed by our unrivaled fleet of lake steamers:

That ordinary sea-going ships will not stand the strains of this traffic is demonstrated by the fact that four steel steamers built on the Clyde for Canadian owners had to be repaired and strengthened throughout after one season's work to fit them for further service.

The friends of British shipbuilders in this country compare the cost of a well built American with that of Clyde built tramps, which have to be rebuilt at the end of a hard season's work. It would be just as fair to compare our American-built buggy with one built in England. Both are buggies and the English one is much the cheaper.

Literary Notices.

"A Manual of Navigation for the Lakes," is the title of a handy 162 page volume from the pen of Mr. H. C. Pearsons a well known writer on navigational interests affecting the lake marine. The work which has been advertised in these columns for the past few weeks, is well worthy of its title, and contains more strictly original matter than any technical publication which we have received for a long time. Such a work, designed and written especially for the advancement of the lake pilot and navigator, will meet with a wide patronage and we are informed that the advance sales are already extensive. We may candidly advise those who have not corresponded with the publishers, to secure this work at an early date, as it will run through the first edition in quick order. We shall take pleasure in referring to the manual from time to time in the future. It is full of just what every navigator should be thoroughly conversant with. Bissell & Scrivens, publishers, Cleveland, O.

"How to run Engines and Boilers," is the title of a compact little volume of 125 pages dedicated to American engineers from the pen of Egbert P. Watson, a thoroughly practical engineer and a widely known writer on technical subject. In this work the author states that no man was ever made an engineer by a book or by rules. Yet, if it were possible to communicate to novices the experience gained by a life long study, we should then say that they would be better armed after a perusal of "How to run Engines and Boilers." The author's opening begins by telling the first thing to be done upon taking charge of an engine or boiler either new or old, and foreighteen chapters clear concise and logical facts relating to the text of the work is continued in the same practical strain. In considering the usual business duties which Mr. Watson attends to, it is surprising that so valuable a compendium has issued from his hands and to all practical steam users we should say procure this work at the earliest possible time, and this suggestion is of urgent importance to the younger members of the profession.—Publishers Egbert P. Watson & Son, 150 Nassau St., New York, price $1.50 bound in cloth.

APPOINTMENT OF OFFICERS.

The Wilson Transit Co., Thos. Wilson, President and General Manager: Steamers, Olympia—Capt. A. M. Shephard Engineer Wm. F. Gregory; Yakima—Capt. Wm. Carlisle; Missoula—Capt. W. W. Dawley, Engineer Brooks Howard; Sitka—Capt. Duncan Buie, Engineer John Skelly; Wallula—Capt. Dan Buie; Spokane—Capt. John Buie, Engineer John W. Dashaw; C. Tower, Jr.—Capt. Geo. Besant, Engineer D. M. Foster. Schooner, Wadena—Capt. W. T. Sutherland.

The Lake Erie Transportation Co., A. W. Colton, president and general manager, Toledo, Ohio, has made the following appointments to the Line for 1892: Steamers, S. C. Reynolds—Capt. F. A. Wetmore, Engineer Geo. Butler; J. C. Gault—Capt. W. M. Cottrell, Engineer Anton Zeitler; Russell Sage—Capt. Henry Root, Engineer J. H. Miller; A. L. Hopkins—Capt. T. C. Herrick, Engineer J. P. Kohlbrenner; City of Toledo—Capt. Edward McNelly, Engineer P. J. June, Clerk S. Bickford.

The Red Star Line of steamers P. P. Miller, general manager has appointed the following officers to this Line: Steamers, Florida—Capt. P. J. Kenny, Engineer Geo. Wise; Wyoming—Capt. Robert Drury, Engineer John Hess; Robert Mills—Capt. Alex Clark, Engineer John Leahey; Cuba—Capt. Robert Young, Engineer Fred Fitzgerald.

The appointments of masters and engineers for the Northern Steamship Company are as follows: Steamers, North Wind—Capt. Delos Waite; Northern King—Capt. William H. Campau; Northern Queen—Capt. E. M. Smith; Northern Wave—Capt. M. Niland; Northern Light—Capt. M. J. Haberer; North Star—Capt. William Thorne. The only change in masters from last year is on the Northern King. Capt. Campau, who sailed the steamer Emily P. Weed last season, having been appointed, vice, Capt. C. W. Brown. The engineers have not yet been assigned to their boats, but their names are William Erskine, William Pike, William Phillippi, Harry Reynolds, John Schuber and Fred Potts.

THE FRYE BILL.

CHICAGO, March 8 1892.

To the Editor of The Marine Record.

I see by last week's edition of THE MARINE RECORD that the Cleveland Vessel Owners' Association are making a great fuss over Senate Bill 1755 introduced by Senator Frye, and protesting against its passage, but I do not hear of the engineers worrying themselves much over it, for my part I think it just what we want; I have read a copy of the bill and as I understand its requirements I think I can safely venture the assertion that three-fourths of our assistant engineers will be able to pass the ordeal when the time comes for them to act as chief, as they have most of them served their time in good marine engine shops such as the old Shepard shop, Cuyahoga, Globe, Frontier, Dry Dock and Hodges, and as to their theoretrical knowledge, a common school education is all that is required. I myself went through the mill on board the U. S. Gunboat Lexington in December 1864, with Commander Bach, Capt. Ramsey and a chief engineer—(I forget his name, he belonged to the Choctaw,) as examining board, and the paces they put me through were just the same as this bill calls for for chief of 2,000 horse power; I was only 21 then and they complimented me on my examination at the time, as I was only a third assistant and a volunteer at that, but all I was asking for was second assistant, but I never got it, as the war closed too soon after that and we went to Mobile in another squadron, hoping to hear from some of the rest of the old boys on this subject.

AN OLD VETERAN

Notes.

THE Chinese government has decided to establish a school of marine engineering for the raising of a corps of marine and naval engineers.

ANYONE knowing the whereabouts of Charles Larrhhee, sole survivor of the schooner Frank Perew, lost last season on Lake Superior, will please notify the office of this paper, as a near relative, is desirous of communicating with him.

THE water has not been so low in Lake St. Clair in many years as it has been during the past few weeks. At Grosse Pointe, rocks were high and dry, though ordinarily covered with several feet of water, loose boulders were taken away and used to build breakwaters near the shore.

ACCORDING to census bulletin number 66 the port of Cleveland owned 163,000 tons of vessel property, Buffalo 128,000 tons, and Chicago 71,000 tons, the commerce of the three cities named given in census bulletin number 28 is as follows: Chicago 7,984,000 tons, Buffalo 6,730,000 tons, and Cleveland 3,621,000 tons.

THE United States Geological Survey has received a distinguished acknowledgment of foreign appprecian, the French Acadamy having voted to award it the Cuvier prize for the greatest scientific service done to the world during the past year. The prize is usually in money, but at the request of Major J. W. Powell, Director of the Survey, it will be put in the form of a gold medal, which can be preserved among the archives of the Survey.

OUR thanks are due to Merchant & Co., Philadelphia, Pa., for a finely illustrated catalogue of their World's Fair exhibits. Among the special marine cuts we find the "Star" ventilator, for the ventilation of hulls, and for the brass and copper seamless tubes of which the firm make a specialty; we also find the following good words for the Lake Superior products: "The Lake Superior copper is virgin copper crushed in its pure metallic state out of the hard rock in which it is deposited, and is the purest and best copper known to exist in our sidereal system, so that no sheet copper is equal to the Lake Superior product."

THE Penberthy Injector Co. of Detroit, Mich., who have established an enviable reputation for their Penberthy injector, have found it necessary to add several lathes and other machinery to their extensive plant to keep up with the demand of their popular machine. They claim to have more Penberthy injectors on the lake steamers, propellers and steam yachts than all other injectors combined, and attribute this to the fact that they have built an injector so adapted to lake use that no amount of jarring, reversing of wheels or rolling of the boat can disturb the feed to the boiler, so, but that it will re-start automatically in every instance, and no little stress should be laid on the very desirable working quality they have succeeded in obtaining, which is the lifting of water through a suction pipe that may have become heated from a leaky steam valve or from the suction of the steam into the well when the injector is stopped, caused by the water in the suction pipe flowing back into the sea-cock and drawing hot water and steam with it. These injectors can be obtained at any of the large steam supply houses located in the different cities on the Great Lakes or of the manufacturers as above named.

WANTED—One good second-hand hoisting engine. Address J. M. Campbell, Michigan, City, Ind. 2-11-3-3

WANTED—Small second hand marine engine and boiler in good condition, cheap for cash, size 5 by 6 to 6 by 8 engine. Address Nels Peterson, Fisher, Minn. 3-10-t-f

WANTED—A situation by a woman as cook on a steambarge, sailed two seasons, state wages. Address Mrs. O. Neil, 117 Champlain street, Detroit, Mich. 2-11-25

WANTED—A good sober captain and engineer to take half interest in boats carrying passengers. Good route. Small capital required. W. J. & Co., Saginaw, E. S. Mich. 31tf

FOR SALE—New marine boiler, size 5 by 10. Fifty 3 inch tubes; new smoke stack and breeching; latest improved legs, tested for 120 pounds steam, Price $800 cash, at Detroit. Address Rice, 30 Board of Trade, Detroit. 1-21-tf

Marine Engine, cylinder 14 by 16 bored out and thoroughly repaired, ready to put in boat, for sale only on account of a change of plans; a new 6 foot Trout wheel, shaft 10 feet long, 4 inches diameter, main bearing, stern bearing, feed pump, complete $400. One Lidgerwood double hoister and boiler, complete, cost $1,000; price $500. Enquire, The H. M. Loud & Sons, Lumber Co., Au Sable, Mich. 5-21tf

ORGANIZED 1881.

Michigan Fire and Marine Insurance Co.,

DETROIT, MICH.

CAPITAL, - - -	$ 400,000
ASSETS, - - -	900,000
LOSSES PAID, over - -	1,500,000

D. WHITNEY, JR. PRESIDENT. EUGENE HARBECK, SECRETARY.

This Company will transact a Hull and Cargo business on the Lakes during the season of 1892.

LOSSES PROMPTLY PAID. INSURE IN A STRONG HOME COMPANY.

MARINE AND INLAND INSURANCE.

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(ORGANIZED 1842.)

Office, 51 Wall Street, NEW YORK.

INSURES AGAINST MARINE AND INLAND TRANSPORTATION RISKS AND WILL ISSUE POLICIES MAKING LOSS PAYABLE IN ENGLAND.

Assets over $10,000,000.00, for the Security of its Policies.

The profits of the Company revert to the assured, and are divided annually upon the premiums terminated during the year; thereby reducing the cost of insurance. For such dividends, certificates are issued bearing interest until ordered to be redeemed, in accordance with the charter.

J. D. JONES, Prest. W. H. H. MOORE, Vice-Prest. A. A. RAVEN, 2nd Vice-Prest. J. H. CHAPMAN, Secy.

CROSBY, MACDONALD & COMPANY,

GENERAL MARINE INSURANCE AGENTS.

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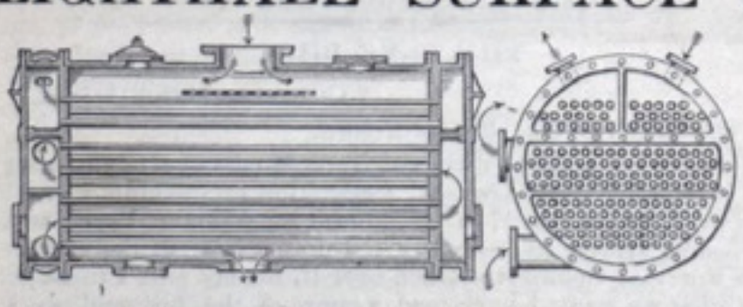

Lighthall Surface Condenser with Cobb's Improvements. Light Weight Brass Condensers a Specialty. Also Feed Water Heaters, Tube Heads, Screw Glands, Packings, Etc.

Builders of Brass and Composition Surface Condensers for U. S. Cruisers MAINE, No. 11, Gunboats Nos. 5 & 6, CONCORD and BENNINGTON and HARBOR DEFENCE RAM.

H. B. & G. B. BURGER,

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MANITOWOC DRY DOCK.

Dry Dock will admit Vessels of 1100 tons drawing 12 feet. Have also a set of Boxes in connection with the Shipyard capable of lifting Vessels of 350 tons. A large stock of SPARS constantly on hand. LARGE SPAR DERRICK.

Vessels Docked and Repaired on Reasonable Terms.

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Insurance Company of North America.

INCORPORATED 1794.

CAPITAL, PAID UP IN CASH, -	$3,000,000.00
ASSETS. - - - - -	$9,273,220.00

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OF LIVERPOOL, ENGLAND.

TRANSATLANTIC MARINE INSURANCE CO.,	OF BERLIN
GENERAL INSURANCE CO.,	OF DRESDEN
SAXONY INSURANCE CO.,	OF SAXONY

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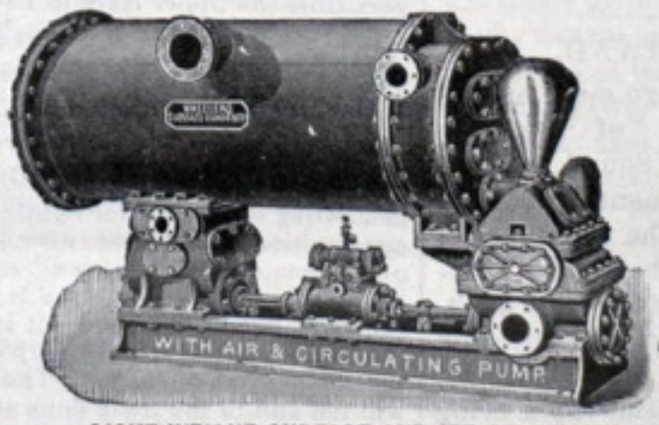

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Buffalo Wrought Steel Ranges

Steamboat and Vessel Ranges and Broilers, with patent Rotary Grate.

SOMETHING NEW AND GOOD.

We also carry the STAMFORD TUG AND YACHT GALLEY STOVES.

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Successors to FELTHOUSEN & RUSSELL.

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